

What is claimed is:

1. A system for stirring a solid suspended in a liquid in a sample vessel, said sample vessel including a stirrer, comprising:

a sample vessel holder, adapted to receive at least one said sample vessel and maintain said sample vessel in a position such that the longitudinal axis of said sample vessel extends at an angle substantially less than 90 degrees with respect to the horizontal; and

a magnet driver, adapted to move a magnet proximate to an outer surface of said sample vessel to permit said magnet to impose a magnetic influence on said stirrer to move said stirrer in said sample vessel.

2. A system as claimed in claim 1, wherein said magnet driver device comprises:

a magnet shaft assembly having said magnet coupled thereto; and

a motor, adapted to move said magnet shaft assembly to move said magnet proximate to said outer surface of said sample vessel and away from said outer surface of said sample vessel.

3. A system as claimed in claim 2, wherein:

said magnet shaft assembly is rotatable; and

said motor rotates said magnet shaft assembly to move said magnet proximate to said outer surface of said sample vessel and away from said outer surface of said sample vessel.

4. A system as claimed in claim 2, wherein:

said motor is magnetically coupled to said magnet shaft assembly.

5. A system as claimed in claim 1, wherein:

said stirrer includes a ferrous metal; and

said magnet imposes said magnetic influence on said ferrous material.

6. A system as claimed in claim 1, wherein:

said magnet driver is adapted to move said magnet such that said magnetic influence moves said stirrer along a side wall of said sample vessel.

7. A system as claimed in claim 1, wherein:

said magnet driver is further adapted to move said magnet away from said outer surface of said sample vessel to allow gravity to move said stirrer toward a bottom of said sample vessel.

8. A system as claimed in claim 1, wherein:

said magnet includes a rare earth magnet.

9. A system as claimed in claim 1, wherein:

said sample vessel holder, is adapted to receive a plurality of said sample vessels and maintain each of said sample vessels in a respective position such that the longitudinal axis of said each sample vessel extends at a respective angle substantially less than 90 degrees with respect to the horizontal; and

said magnet driver, is adapted to move each of a plurality of magnets proximate to an outer surface of a respective one of said sample vessels to permit said magnet to impose a magnetic influence on said stirrer in said respective sample vessel to move said stirrer in said respective sample vessel.

10. A system as claimed in claim 1, wherein:

said sample vessel holder is adapted to maintain said sample vessel at said angle which is within the range of about 15 degrees to about 25 degrees with respect to the horizontal.

11. A method for stirring a solid suspended in a liquid in a sample vessel, said sample vessel including a stirrer, comprising:

maintaining said sample vessel in a position such that the longitudinal axis of said sample vessel extends at an angle substantially less than 90 degrees with respect to the horizontal; and

moving a magnet proximate to an outer surface of said sample vessel to permit said magnet to impose a magnetic influence on said stirrer to move said stirrer in said sample vessel.

12. A method as claimed in claim 11, wherein said moving further comprises: moving said magnet away from said outer surface of said sample vessel.

13. A method as claimed in claim 11, wherein said moving further comprises: rotating said magnet to move said magnet proximate to said outer surface of said sample vessel and away from said outer surface of said sample vessel.

14. A method as claimed in claim 11, wherein said moving further comprises: moving said magnet such that said magnetic influence moves said stirrer along a side wall of said sample vessel.

15. A method as claimed in claim 11, wherein said moving further comprises: moving said magnet away from said outer surface of said sample vessel to allow gravity to move said stirrer toward a bottom of said sample vessel.

16. A method as claimed in claim 11, wherein:  
said magnet includes a rare earth magnet.

17. A method as claimed in claim 11, wherein:

said maintaining maintains each of a plurality of said sample vessels in a respective position such that the longitudinal axis of said each sample vessel extends at a respective angle substantially less than 90 degrees with respect to the horizontal; and

said moving moves each of a plurality of magnets proximate to an outer surface of a respective one of said sample vessels to permit said magnet to impose a magnetic influence on said stirrer in said respective sample vessel to move said stirrer in said respective sample vessel.

18. A method as claimed in claim 11, wherein:

said maintaining maintains said sample vessel at said angle which is within the range of about 15 degrees to about 25 degrees with respect to the horizontal.